

I Claim:

1. A device for preventing an exhaust gas recirculation valve from sticking after switching off the internal combustion engine, in particular for a motor vehicle, having an exhaust gas recirculation line which branches off from an exhaust line and leads into a fresh gas line and is used for recirculating exhaust gas, the exhaust gas recirculation line having a valve with a closing element and the closing element being able to be moved between a closing position and an opening position by means of an actuator, and, when the internal combustion engine is not in operation, the closing element of the valve being placed in an idle position by means of the actuator, characterized in that the closing element of the valve can be activated by the actuator via a gear mechanism, it being possible for a rotational movement of the actuator to be converted into a linear movement of the closing element by means of the gear mechanism, and in that the gear mechanism has a first movement range and a second movement range, the first movement range being limited by the opening position and the closing position of the closing element of the valve, and the second movement range being limited by the closing position and the idle position of the closing element of the valve.
2. The device as claimed in claim 1, characterized in that the idle position of the closing element of the valve is predetermined by a stop for the gear mechanism.
3. The device claimed in claim 2, characterized in that the stop can be adjusted.

4. The device as claimed in claim 1, characterized in that the gear mechanism for resetting the closing element both into the idle position and into the closing position has a resetting spring.
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5. The device as claimed in claim 1, characterized in that the current position of the closing element of the valve can be detected by a sensor connected to a control unit.
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6. The device as claimed in claim 1, characterized in that the valve is a disk valve.
7. The device as claimed in claim 1, characterized in that the amount of fresh gas to be supplied to the internal combustion engine can be set via an activatable spring-valve mechanism, the valve leading downstream directly after the activatable swing-valve mechanism into the fresh gas line.
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8. The device as claimed in claim 1, characterized in that the swing-valve mechanism comprises a butterfly valve.
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9. The device as claimed in claim 1, characterized in that the internal combustion engine is a direct injection spark ignition engine or a direct injection diesel engine.